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MEMORANDUM FOR THE SECRETARY OF STATE

SUBJECT : Soviet Air Defense Capabilities

1. With respect to your informal query at the 15 June NSC meeting as to our intelligence coverage of Soviet air defenses, the intelligence community has been paying close attention to the considerable Soviet progress in this field. Our last national estimate devoted entirely to Bloc Air Defense Capabilities (NIE 11-5-55) was completed in July 1955, and is scheduled for revision in early 1957. In addition our new NIE on the Soviet Guided Missile Program, now scheduled for September, will cover air defense aspects.

2. In the interim the best current summary of estimated Soviet air defense capabilities is in draft NIE 11-4-56 on Soviet Capabilities and Courses of Action Through 1961 which has been cleared at the staff level but has not yet received IAC approval. For your convenience I am attaching the appropriate extract from this draft NIE.

ALLEN W. DULLES
Director

Attachment

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Extract from Draft NIC 11-4-56

128. Air Defense Capabilities. The Soviet leaders probably believe that the defense of the USSR against nuclear attack would depend in large measure upon the success of an initial Soviet assault on Western retaliatory capability.* But the USSR has large air defense forces whose task would be to reduce the effectiveness of counterattack by Western forces which escaped destruction in the initial Soviet attacks. The air defense system of the USSR provides for the employment of the 3,350 aircraft in the Soviet Aviation of Air Defense and for the potential employment of the remaining 7,600 Soviet and Satellite aircraft. In addition, the Chinese Communists and North Koreans have about 1,750 fighters which could make some contribution to the defense of the Soviet Far East. We believe that the air defense role of the fighters of Tactical and Naval Aviation would be given priority in the early stages of a general war. We estimate that Soviet PVC and field forces now possess a total of over 17,000 antiaircraft artillery pieces, and that significant developments in both high and low altitude weapons have been made over the last several years. The USSR still relies heavily upon radar-directed antiaircraft artillery, but guided missiles are now being added to the air defenses of Moscow and probably to other areas of key strategic importance to the USSR. By the end of the period, we estimate that surface-to-air missiles will have largely replaced heavy antiaircraft artillery in the static defense of the more important strategic targets. Even earlier, the air-to-air missile will probably have enhanced the capabilities of fighter defense forces.

129. We estimate that Soviet air defense capabilities in areas of dense air defense concentration (European USSR, Eastern Europe, and the Maritime-South Manchuria area of the Far East) are as indicated below. Capabilities in other areas are probably considerably less.

* The representative for the Assistant Chief of Staff, Intelligence, Department of the Army, reserves his position on this sentence, believing that defense would depend primarily upon Soviet air defense capabilities themselves, and also in part upon the threat of Soviet nuclear retaliation.

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a. Against bombers between 5,000 and 35,000 feet in daylight and clear weather, we believe the Soviet air defense system is capable of inflicting severe losses on high-speed jet bombers. At higher altitudes this capability would begin to diminish, and above 45,000 feet would fall off markedly, due to problems of target detection, loss of AAA and surface-to-air missile effectiveness, and reduced GCI capabilities. These capabilities would, however, greatly increase under certain conditions. For example, the presence of visible contrails would enhance interceptor capabilities. Against bombers penetrating peripheral areas at high speed and minimal altitude the effectiveness of the defense would be very low.

b. Against multiple-pronged penetrations utilizing altitude stacking, diversionary tactics, and electronic countermeasures, we believe the Soviet air defense system is subject to disruption and saturation, which would progressively reduce its effectiveness.

c. Against air attacks conducted under poor visibility conditions, we believe the Soviet air defense system is at present capable of offering only limited resistance, owing to the inadequacy of equipment and training for all-weather operations. The rapid introduction of all-weather fighters into operational units and the advent of surface-to-air missiles is, however, giving the USSR an increasing capability in this field.

130. During the period of this estimate, Soviet air defense capabilities will almost certainly be substantially increased, due to greater operational experience and the introduction into the defensive forces of additional supersonic and all-weather fighters, new fighter types, improved early warning and GCI equipment, electronic countermeasures, additional guided missiles and improved missile types. Despite these improvements, however, we estimate that Soviet air defenses will still be vulnerable to exploitation by penetration forces.

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